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10/510,493

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David I. Hoult

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EXAMINER

SCHINDLER, DAVID M

ART UNIT

PAPER NUMBER

2862

MAIL DATE

DELIVERY MODE

01/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/510,493

Applicant(s)

HOULT, DAVID I.

Examiner

David M. Schindler

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17, 18, 20-23, 25-28, 30-32, 34-36 and 38 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-16 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 19, 24, 29, 33 and 37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/7/04, 6/1/07</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This communication is in response to the communication filed 10/19/2007.
2. Applicant is advised that should claim 1 be found allowable, claim 16 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Election/Restrictions***

3. Applicant's election of claims 17-38 is acknowledged. However, upon further consideration, the restriction requirement of 9/21/2007 is withdrawn. Therefore, all claims will be examined.

***Oath/Declaration***

4. It is noted to applicant that the submitted Oath on 6/3/2005 states that the PCT number is PCT/CA03/00565. However, the transmittal form for this application states that the PCT number is PCT/CA03/00564.

***Information Disclosure Statement***

5. The Oath stands objected to for the following reason: It is noted to applicant that references 7,113,829 and 3003/0171669 on the Information Disclosure Statement submitted 6/1/2007 have not been considered. The first reference does not appear to match the name submitted, and the second reference number does not appear to be correct.

***Claim Objections***

6. Claims 4, 6, 7, 12, 19, 24, 29, 33, and 37 are objected to because of the following informalities:

7. As to Claims 6 and 7,

8. The phrase "according to any one of Claim 1" on lines 1-2 is awkward.

9. As to Claim 4,

10. This claim states "the substantially vertical coil legs at spaced positions along the path have a height of the order of the height of a person walking along the path." However, the actual height of the coil legs is unclear as the height of a person walking along the path is unclear. The actual height of a person who will walk along the path will vary with each respective individual, which therefore means that the

height of the coil legs would vary with each individual. This claim is therefore unclear.

11. As to Claim 12,

12. The phrase "wherein at least one sense coil defines a zone within the at least one sense coil and there is provided a device for detecting entry of the person into and departure of the person from the zone" on lines 2-4 is unclear.

Specifically, it is noted to applicant that while it is understood that a person will pass in the zone created by the left and right side coils as depicted in Figure 2, it does not appear that a person will pass within a zone that is defined to be within the actual coil itself.

13. As to Claim 19,

14. This claim is objected to for a similar reason as the above objection of claim 4.

15. As to Claim 24,

16. This claim is objected to for a similar reason as the above objection of claim 12.

17. As to Claim 29,

18. This claim is objected to for a similar reason as the above objection of claim 4.

19. As to Claim 33,

20. This claim is objected to for a similar reason as the above objection of claim 12.

21. As to Claim 37,

22. This claim is objected to for a similar reason as the above objection of claim 12.

23. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

26. Claims 1, 2, 5, 7, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp (2003/0171669) in view of Von Gutfeld et al. (Von) (6,337,627).

27. As to Claims 1 and 16,

28. Kopp discloses guide members (note vertical arms) defining a path along with persons, who are potentially transporting a ferromagnetic object, are prescribed to pass ((Figure 1) and (Page 2, Paragraph [0019])), the apparatus being arranged for use with a separate high strength magnetic of a type which renders ferromagnetic objects potentially dangerous (Page 2, Paragraph [0020]), the guide members being arranged such that the path is located, in use, in a fringe portion of the magnetic field of the magnet (Page 2, Paragraph [0020]), at least one Hall effect sensor mounted at the guide members ((Figure 1) and (Page 2, Paragraph [0019])), the at least one Hall effect sensor being arranged such that it is located, in use, in the magnetic field of the separate high strength magnet ((Figure 1) and (Page 2, Paragraphs [0019] and [0020])), the at least one Hall effect sensor being arranged at a predetermined location and orientation relative to the guide members such that, as a person transporting a ferromagnetic object to be detected passes along the prescribed path, the movement of the ferromagnetic object in

the field of the separate high strength magnet causes a voltage to be generated in the at least one Hall effect sensor (Page 2, Paragraph [0019] and [0020])), and an electrical measuring device (15) for measuring an electrical signal generated by the Hall effect sensor when the ferromagnetic object travels in the path ((Figure 1) and (Page 2, Paragraph [0021])), the electrical measuring device being arranged to provide a warning indication when the electrical signal exceeds a predetermined value (Page 2, Paragraphs [0021] and [0022]).

29. Kopp does not disclose the use of at least one sense coil in place of the at least one Hall effect sensor.

30. Von discloses that it is known in the art to utilize either a sensor coil or a Hall probe for magnetic field for magnetic field measuring (Column 5, Lines 33-40).

31. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp to include replacing the at least one Hall effect sensor with at least one sense coil as a sense coil and a Hall effect sensor are art recognized equivalents. A person of ordinary skill in the art would have known to utilize either a Hall effect sensor or a sense coil given the above disclosure and teaching of Von in order to measure a magnetic field (MPEP 2144.06).



32. As to Claim 2,

33. Kopp in view of Von discloses the at least one sense coil and the guide members are arranged such that the path and field of the separate high strength magnet are, in use, substantially parallel ((Figure 1) and (Page 2, Paragraph [0020]) / of Kopp).

34. As to Claim 5,

35. Kopp in view of Von discloses the at least one coil lies in a plane generally parallel to the path along one side of the path (Figure 1 of Kopp).

36. As to Claim 7,

37. Kopp discloses the at least one Hall effect sensor includes at least two Hall effect sensors, one on each side of the path ((Figure 1) and (Page 2, Paragraph [0019])).

38. Kopp does not disclose the at least one coil include at least two coils.

39. Von discloses that it is known in the art to utilize either a sensor coil or a Hall probe for magnetic field for magnetic field measuring (Column 5, Lines 33-40).

40. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp to include replacing the at least one Hall effect sensor that includes at least two Hall effect sensors with at least one sense coil which

includes at least coils as a sense coil and a Hall effect sensor are art recognized equivalents. A person of ordinary skill in the art would have known to utilize either a Hall effect sensor or a sense coil given the above disclosure and teaching of Von in order to measure a magnetic field (MPEP 2144.06).

41. Claims 3, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp (2003/0171669) in view of Von Gutfeld et al. (Von) (6,337,627) as applied to claim 1 and in further view of Burton (6,362,739).

42. As to Claim 3,

43. Kopp in view of Von disclose as explained above.

44. Kopp in view of Von do not disclose the at least one coil provides substantially vertical coil legs at spaced positions along the path.

45. Burton discloses the at least one coil provides substantially vertical coil legs at spaced positions along the path ((Figure 4) and (Column 4, Lines 42-54)).

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von to include the at least one coil provides substantially vertical coil legs at spaced positions along the path as taught by Burton

in order to advantageously utilize a ferromagnetic metal detector which is inexpensive to manufacture and also to operate, and that is highly portable and less prone to false alarms (Column 5, Lines 56-62).

46. As to Claim 4,

47. Kopp in view of Von do not disclose the substantially vertical coil legs at spaced positions along the path have a height of the order of the height of a person walking along the path.

48. Burton discloses the substantially vertical coil legs at spaced positions along the path have a height of the order of the height of a person walking along the path ((Figure 4) and (Column 4, Lines 42-54)).

49. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von to include the substantially vertical coil legs at spaced positions along the path have a height of the order of the height of a person walking along the path as taught by Burton in order to advantageously utilize a ferromagnetic metal detector which is inexpensive to manufacture and also to operate, and that is highly portable and less prone to false alarms (Column 5, Lines 56-62).

50. As to Claim 6,

51. Kopp in view of Von do not disclose the at least one coil includes at least two coils arranged to provide on each side of the path two substantially vertical coil legs at spaced positions along the path.

52. Burton discloses the at least one coil includes at least two coils arranged to provide on each side of the path two substantially vertical coil legs at spaced positions along the path ((Figure 6) and (Column 5, Lines 5-20)).

53. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von to include the at least one coil includes at least two coils arranged to provide on each side of the path two substantially vertical coil legs at spaced positions along the path as taught by Burton in order to advantageously utilize a ferromagnetic metal detector which is inexpensive to manufacture and also to operate, and that is highly portable and less prone to false alarms (Column 5, Lines 56-62).

54. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp (2003/0171669) in view of Von Gutfeld et

al. (Von) (6,337,627) as applied to claim 7 and in further view of Johnstone et al. (Johnstone) (6,133,829).

55. As to Claim 8,

56. Kopp in view of Von disclose as explained above.

57. Kopp in view of Von disclose each of the two coils includes a set of coils (Figure 1 of Kopp).

58. Kopp in view of Von does not disclose each of the two coils includes a set of coils including associated therewith at least one additional coil shaped and arranged to cancel components of electrical signal generated by fields or movements outside of the path.

59. Johnstone discloses each of the two coils includes a set of coils including associated therewith at least one additional coil shaped and arranged to cancel components of electrical signal generated by fields or movements outside of the path ((Figure 1) and (Column 1, Lines 47-67) and (Column 2, Lines 1-6)).

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von to include each of the two coils includes a set of coils including associated therewith at least one additional coil shaped and arranged to cancel components of electrical signal generated by

fields or movements outside of the path as taught by Johnstone in order to minimize the detection of unwanted signals.

60. As to Claim 9,

61. Kopp in view of Von discloses wherein each of the two sets of coils is located on a respective side of the path and each set has the coils thereof parallel to the path (Figure 1 of Kopp).

62. (It is noted to applicant that part of the coils which have replaced the Hall sensors of Kopp due to the teaching of Von will be along a direction that is parallel to the path).

63. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp (2003/0171669) in view of Von Gutfeld et al. (Von) (6,337,627) as applied to claim 1 and in further view of Roybal (6,150,810).

64. As to Claim 12,

65. Kopp in view of Von disclose as explained above.

66. Kopp in view of Von disclose the at least one sense coil defines a zone within the at least one sense coil (Figure 1 of Kopp).

67. Kopp in view of Von does not disclose there is provided a device for detecting entry of the person into and departure of the person from the zone.

68. Roybal discloses there is provided a device for detecting entry of the person into and departure of the person from the zone ((Column 17, Lines 57-67) and (Column 18, Lines 1-17)).

69. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von to include there is provided a device for detecting entry of the person into and departure of the person from the zone given the above disclosure and teaching of Roybal in order to minimize and conserve the amount of energy used by the device.

70. As to Claim 13,

71. Kopp in view of Von do not disclose the electrical measuring device is arranged to provide an integral of the electrical signal as the person moves through the zone.

72. Roybal discloses the electrical measuring device is arranged to provide an integral of the electrical signal as the person moves through the zone ((Figure 6C) and (Column 15, Lines 52-65)).

73. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von

to include the electrical measuring device is arranged to provide an integral of the electrical signal as the person moves through the zone as taught by Roybal in order to estimate the mass of the detected ferromagnetic object (Column 15, Lines 52-54).

74. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp (2003/0171669) in view of Von Gutfeld et al. (Von) (6,337,627) and Roybal (6,150,810) as applied to claim 12 and in further view of Burton (6,362,739).

75. As to Claim 14,

76. Kopp in view of Von and Roybal discloses as explained above.

77. Kopp in view of Von does not disclose the at least one coil includes two vertical coil legs at spaced positions along the path and the detecting device is arranged at the legs so as to define the zone therebetween.

78. Burton discloses the at least one coil includes two vertical coil legs at spaced positions along the path ((Figure 4) and (Column 4, Lines 42-54)).

79. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von



to include the at least one coil includes two vertical coil legs at spaced positions along the path as taught by Burton in order to advantageously utilize a ferromagnetic metal detector which is inexpensive to manufacture and also to operate, and that is highly portable and less prone to false alarms (Column 5, Lines 56-62).

80. Roybal discloses the detecting device is arranged at the legs ((Figure 1) and (Column 17, Lines 57-67) and (Column 18, Lines 1-17)).

81. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von and Burton to include the detecting device is arranged at the legs so as to define the zone therebetween given the above disclosure and teaching of Roybal in order to place the detecting device in an adequate location to allow for the detection of individuals.

82. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp (2003/0171669) in view of Von Gutfeld et al. (Von) (6,337,627) as applied to claim 1 and in further view of Takamori et al. (Takamori) (6,567,685).

83. As to Claim 15,

84. Kopp in view of Von disclose as explained above.

85. Kopp in view of Von do not disclose the at least one coil and the path are mounted on at least one anti-vibration platform.

86. Takamori et al. discloses the at least one coil and the path are mounted on at least one anti-vibration platform ((Figures 1 and 5) and (Column 5, Lines 1-11)).

87. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Kopp in view of Von to include the at least one coil and the path are mounted on at least one anti-vibration platform as taught by Takamori in order to minimize error introduced into the output of the sensor coil by the vibrations.

***Allowable Subject Matter***

88. Claims 10, 11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

89. Claims 17, 18, 20-23, 25-28, 30-32, 34-36, and 38 are allowed.

90. Claims 19, 24, 29, 33, and 37 are allowed upon overcoming the above noted claim objections.

91. The following is an examiner's statement of reasons for allowance:

92. As to Claim 10,

93. The primary reason for the allowance of claim 10 is the inclusion of wherein each set of coils includes an outermost largest coil, an intermediate coil smaller than the outermost coil, and two innermost coils which are each smaller than the intermediate coil and arranged one above the other. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

94. As to Claim 36,

95. The primary reason for the allowance of claim 36 is the inclusion of the sensing assemblies each include a primary sensing device and at least one secondary sensing device spaced at a different distance relative to the primary sensing device from the path and arranged to reduce components of electrical signal generated by fields or movements outside of the path sufficiently to avoid false warning indications caused by the

fields or movements. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

96. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

97. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Schindler whose telephone number is (571) 272-2112. The examiner can normally be reached on Monday-Friday (8:00AM-5:00PM).

98. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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99. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David M. Schindler  
Examiner  
Art Unit 2862

DMS

A handwritten signature in black ink, appearing to read 'Patrick Assouad', written in a cursive style.

**PATRICK ASSOUD  
SUPERVISORY PATENT EXAMINER**